

Southcentral Regional Office CLEAN WATER PROGRAM

Application Type	New
Wastewater Type	Sewage
Facility Type	SRSTP

NPDES PERMIT FACT SHEET INDIVIDUAL SFTF/SRSTP

Application No.	PA0267571
APS ID	1045251
Authorization ID	1364896

Applicant Name	Richa	ard F Botteicher	Facility Name	Botteicher Residence
Applicant Address	600 E	Diamond Circle	Facility Address	153 Burket Road
	Martir	nsburg, PA 16662-1615		Hollidaysburg, PA 16664
Applicant Contact	Richa	rd Botteicher	Facility Contact	Richard Botteicher
Applicant Phone	(814)	934-8202	Facility Phone	(814) 934-8202
Client ID	36479	95	Site ID	851267
SIC Code	8811		Municipality	Frankstown Township
SIC Description	Services - Private Households		County	Blair
Date Application Rece	eived	August 6, 2021	WQM Required	
Date Application Acce	pted	August 12, 2021	WQM App. No.	0721404

Approve	Deny	Signatures	Date
		Nicholas Hong, P.E. / Environmental Engineer	August 17, 2021
X		Nick Hong (via electronic signature)	August 17, 2021
		Daniel W. Martin, P.E. / Environmental Engineer Manager	
х		Maria D. Bebenek for Daniel W. Martin	
			August 27, 2021
		Maria Bebenek, P.E. / Environmental Program Manager	
х		Maria D. Bebenek	August 27, 2021

Summary of Review

The application submitted by the applicant requests a new NPDES/WQM permit for the Botteicher Residence located at 153 Burket Road, Hollidaysburg, PA 16664 in Blair County, municipality of Frankstown Township. The application was received by DEP Southcentral Regional Office (SCRO) on August 6, 2021.

The purpose of this Fact Sheet is to present the basis of information used for establishing the proposed NPDES permit effluent limitations. The Fact Sheet includes a description of the facility, a description of the facility's receiving waters, and a description of the facility's receiving waters attainment/non-attainment assessment status. Section 5 provides the justification for the proposed NPDES effluent limits derived from technology based effluent limits (TBEL), water quality based effluent limits (WQBEL), total maximum daily loading (TMDL), antidegradation, anti-backsliding, and/or whole effluent toxicity (WET). A brief summary of the outlined descriptions has been included in the Summary of Review section.

The subject facility is a 0.0004 MGD treatment facility. The NPDES application has been processed as a Small Flow Treatment Facility due to the type of sewage and the design flow rate for the facility. The applicant disclosed the Act 14 requirement to Blair County Planning Commission and Frankstown Township Municipal Building and the notice was received by the parties on April 19, 2021. A planning approval letter issued by DEP on August 4, 2021 under DEP Code #A3-07911-212-3s.

Utilizing the DEP's web-based Emap-PA information system, the receiving waters has been determined to be Oldtown Run. The sequence of receiving streams that the Oldtown Run discharges into are the Frankstown Branch Juniata River, the Juniata River, and the Susquehanna River which eventually drains into the Chesapeake Bay. Due to the low flow rate generated by the facility, the subject site is not subject to the Chesapeake Bay implementation requirements. The receiving water has protected water usage for warm water fishes (WWF) and migratory fishes (MF). No Class A Wild Trout fisheries are impacted by this discharge. The absence of high quality and/or exceptional value surface waters removes the need for an additional evaluation of anti-degradation requirements.

The Oldtown Run is a Category 2 stream listed in the 2020 Integrated List of All Waters (formerly 303d Listed Streams). This stream is an attaining stream that supports aquatic life. The receiving waters is not subject to a total maximum daily load (TMDL) plan to improve water quality in the subject facility's watershed.

Sludge use and disposal description and location(s): Since this is a new NPDES/WQM, this is not applicable.

The proposed permit will expire five (5) years from the effective date.

Based on the review in this report, it is recommended that the permit be drafted. DEP will publish notice of the receipt of the NPDES permit application and a tentative decision to issue the individual NPDES permit in the *Pennsylvania Bulletin* in accordance with 25 Pa. Code § 92a.82. Upon publication in the *Pennsylvania Bulletin*, DEP will accept written comments from interested persons for a 30-day period (which may be extended for one additional 15-day period at DEP's discretion), which will be considered in making a final decision on the application. Any person may request or petition for a public hearing with respect to the application. A public hearing may be held if DEP determines that there is significant public interest in holding a hearing. If a hearing is held, notice of the hearing will be published in the *Pennsylvania Bulletin* at least 30 days prior to the hearing and in at least one newspaper of general circulation within the geographical area of the discharge.

Any additional information or public review of documents associated with the discharge or facility may be available at PA DEP Southcentral Regional Office (SCRO), 909 Elmerton Avenue, Harrisburg, PA 17110. To make an appointment for file review, contact the SCRO File Review Coordinator at 717.705.4700.

1.0 Applicant

1.1 General Information

This fact sheet summarizes PA Department of Environmental Protection's review for the NPDES renewal for the following subject facility.

Facility Name: Botteicher Residence

NPDES Permit # PA026571

Physical Address: 153 Burket Road

Hollidaysburg, PA 16664

Mailing Address: 600 Diamond Circle

Martinsburg, PA 16662

Contact: Richard Botteicher

Homeowner

hbotteicher@atlanticbb.net

Consultant: John DeLacio

President

Advanced Treatment, Inc. Delacio.john@gmail.com

(724) 935-0425

1.2 Permit History

Description of Facility

The proposed system will serve an existing three-bedroom residential dwelling that had a malfunctioning sewage system. The property is located on a parcel of 0.85 acres. The point of discharge shall be through a recorded easement to Oldtown Run.

Adjacent properties are residential sites with onlot sewage systems. Besides the owner, there are no water wells involved as the point of discharge is a perennial stream.

A point of first use report was not necessary since the discharge is to a perennial stream.

Permit submittal included the following information.

NPDES Application

2.0 Treatment Facility Summary

2.1.1 Site location

The physical address for the facility is 153 Burket Road, Hollidaysburg, PA 16664. A topographical and an aerial photograph of the facility are depicted as Figure 1 and Figure 2.

Figure 1: Topographical map of the subject facility

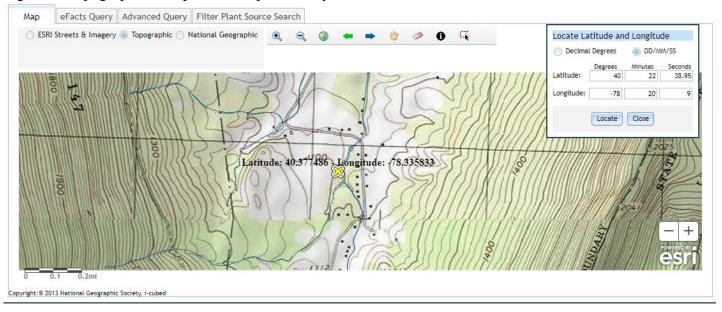
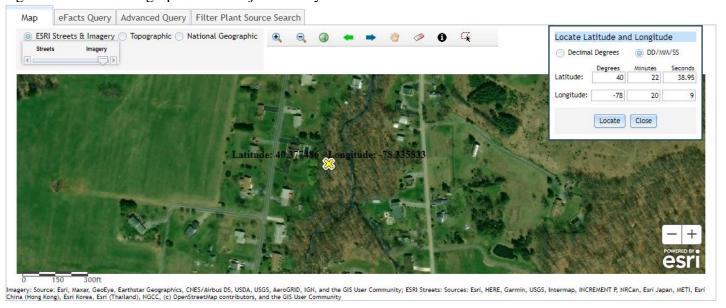


Figure 2: Aerial Photograph of the subject facility



2.2 Description of Wastewater Treatment Process

The subject facility is a 0.0004 MGD design flow facility. The subject facility shall treat wastewater using a 1,000-gallon concrete septic tank, an effluent filter, a Premier Tech Ecoflo EC7-C-P coco filter, and a UV disinfection unit prior to discharge through the outfall.

The treatment process is summarized in the table.

	Tre	eatment Facility Summa	ry	
Treatment Facility Na	me: SFTF Botteicher Rich	ard		
WQM Permit No.	Issuance Date			
0721404	TBD			
	Dograp of			Ava Annual
Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Tertiary	ECOFLO Coco Filter	Ultraviolet	0.0004
Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.0004		Not Overloaded		

2.3 Facility Outfall Information

The facility has the following outfall information for wastewater.

Outfall No.	001		Design Flow (MGD)	.0004
Latitude	40° 22' 39.00"	1	Longitude	-78° 20' 9.00"
Wastewater D	escription:	Sewage Effluent		_

4.0 Receiving Waters and Water Supply Information Detail Summary

4.1 Receiving Waters

The receiving waters has been determined to be Oldtown Run. The sequence of receiving streams that the Oldtown Run discharges into are the Frankstown Branch Juniata River, the Juniata River, and the Susquehanna River which eventually drains into the Chesapeake Bay.

4.2 Public Water Supply (PWS) Intake

The closest PWS to the subject facility is Mifflintown Municipal Authority (PWS ID #4340008) located approximately 101 miles downstream of the subject facility on the Juniata River. Based upon the distance and the flow rate of the facility, the PWS should not be impacted.

4.3 Class A Wild Trout Streams

Class A Wild Trout Streams are waters that support a population of naturally produced trout of sufficient size and abundance to support long-term and rewarding sport fishery. DEP classifies these waters as high-quality coldwater fisheries.

The information obtained from EMAP suggests that no Class A Wild Trout Fishery will be impacted by this discharge.

4.4 2020 Integrated List of All Waters (303d Listed Streams)

Section 303(d) of the Clean Water Act requires States to list all impaired surface waters not supporting uses even after appropriate and required water pollution control technologies have been applied. The 303(d) list includes the reason for impairment which may be one or more point sources (i.e. industrial or sewage discharges) or non-point sources (i.e. abandoned mine lands or agricultural runoff and the pollutant causing the impairment such as metals, pH, mercury or siltation).

States or the U.S. Environmental Protection Agency (EPA) must determine the conditions that would return the water to a condition that meets water quality standards. As a follow-up to listing, the state or EPA must develop a Total Maximum Daily Load (TMDL) for each waterbody on the list. A TMDL identifies allowable pollutant loads to a waterbody from both point and non-point sources that will prevent a violation of water quality standards. A TMDL also includes a margin of safety to ensure protection of the water.

The water quality status of Pennsylvania's waters uses a five-part categorization (lists) of waters per their attainment use status. The categories represent varying levels of attainment, ranging from Category 1, where all designated water uses are met to Category 5 where impairment by pollutants requires a TMDL for water quality protection.

The receiving waters is listed in the 2020 Pennsylvania Integrated Water Quality Monitoring and Assessment Report as a Category 2 waterbody. The surface waters is an attaining stream that supports aquatic life. The designated use has been classified as protected waters for warm water fishes (WWF) and migratory fishes (MF).

4.5 Low Flow Stream Conditions

Water quality modeling estimates are based upon conservative data inputs. The data are typically estimated using either a stream gauge or through USGS web based StreamStats program. The NPDES effluent limits are based upon the combined flows from both the stream and the facility discharge.

A conservative approach to estimate the impact of the facility discharge using values which minimize the total combined volume of the stream and the facility discharge. The volumetric flow rate for the stream is based upon the seven-day, 10-year low flow (Q710) which is the lowest estimated flow rate of the stream during a 7 consecutive day period that occurs once in 10 -year time period. The facility discharge is based upon a known design capacity of the subject facility.

The low flow yield and the Q710 for the subject facility was estimated using StreamStats.

Low flow yield is 0.0408 ft³/s/mi².

The Q710 is 0.143 ft³/s.

Outfall No. 001			_ Design Flow (MGD)	.0004	
Latitude 40	22' 38.6	7"	_ Longitude	-78° 20' 7.54"	
Quad Name			_ Quad Code		
Wastewater Des	cription:	Sewage Effluent			
Receiving Waters	s Oldto	wn Run (WWF, MF)	Stream Code	16434	
NHD Com ID	6560	9490	RMI	0.0900	
Drainage Area	3.5		Yield (cfs/mi²)	0.0408	
Q ₇₋₁₀ Flow (cfs)	0.143	3	Q ₇₋₁₀ Basis	StreamStats	
Elevation (ft)	1095		Slope (ft/ft)		
Watershed No.	11-A		Chapter 93 Class.	WWF, MF	
Existing Use	Same as Chapter 93 class.		Existing Use Qualifier		
Exceptions to Use			Exceptions to Criteria		
Assessment Stat	us	Attaining Use(s) support	ts aquatic life		
Cause(s) of Impa	irment	Not appl.			
Source(s) of Impa	airment	Not appl.			
TMDL Status		Not appl.	Name		
Background/Amb	oient Data		Data Source		
pH (SU)		Not appl.			
Temperature (°F))	Not appl.			
Hardness (mg/L)		Not appl.			
Other:					
Nearest Downstr	eam Publ	ic Water Supply Intake	Mifflintown Municipal Authority	/	
PWS Waters	Juniata	River	Flow at Intake (cfs)		
PWS RMI	37		Distance from Outfall (mi)	101	

5.0: Overview of Presiding Water Quality Standards

5.1 General

There are at least six (6) different policies which determines the effluent performance limits for the NPDES permit. The policies are technology based effluent limits (TBEL), water quality based effluent limits (WQBEL), antidegradation, total maximum daily loading (TMDL), anti-backsliding, and whole effluent toxicity (WET) The effluent performance limitations enforced are the selected permit limits that is most protective to the designated use of the receiving waters. An overview of each of the policies that are applicable to the subject facility has been presented in Section 6.

5.2.1 Technology-Based Limitations

TBEL treatment requirements under section 301(b) of the Act represent the minimum level of control that must be imposed in a permit issued under section 402 of the Act (40 CFR 125.3).

Small flow treatment facilities are confined to permit limitations promulgated by the Small Flow Treatment Facilities Manual (Document # 36-0300-002) and the SOP- New and Reissuance Small Flow Treatment Facility Individual NPDES Permit Application (Revised May 17, 2019).

Parameter	Avg Mo	IMAX	Sample Type	Frequency: SRSTPs
Flow (GPD)	Report	XXX	Estimate	1/year
BOD5 (mg/l)	10	20	Grab	1/year
TSS (mg/l)	10	20	Grab	1/year
Fecal Coliform (No/100 ml)	200 Geometric Mean		Grab	1/year

5.3 Water Quality-Based Limitations

WQBEL are based on the need to attain or maintain the water quality criteria and to assure protection of designated and existing uses (PA Code 25, Chapter 92a.2). The subject facility that is typically enforced is the more stringent limit of either the TBEL or the WQBEL.

The facility is not subject to water quality based effluent limitations.

5.3.1 Water Quality Modeling 7.0

The facility is not subject to WQM modeling.

5.3.2 Toxics Modeling

The facility is not subject to Toxics modeling.

5.3.3 Whole Effluent Toxicity (WET)

The facility is not subject to WET.

5.4 Total Maximum Daily Loading (TMDL)

5.4.1 TMDL

The goal of the Clean Water Act (CWA), which governs water pollution, is to ensure that all of the Nation's waters are clean and healthy enough to support aquatic life and recreation. To achieve this goal, the CWA created programs designed to regulate and reduce the amount of pollution entering United States waters. Section 303(d) of the CWA requires states to assess their waterbodies to identify those not meeting water quality standards. If a waterbody is not meeting standards, it is listed as impaired and reported to the U.S. Environmental Protection Agency. The state then develops a plan to clean up the impaired waterbody. This plan includes the development of a Total Maximum Daily Load (TMDL) for the pollutant(s) that were found to be the cause of the water quality violations. A Total Maximum Daily Load (TMDL) calculates the maximum amount of a specific pollutant that a waterbody can receive and still meet water quality standards.

Pennsylvania has committed to restoring all impaired waters by developing TMDLs and TMDL alternatives for all impaired waterbodies. The TMDL serves as the starting point or planning tool for restoring water quality.

5.4.1.1 Local TMDL

The subject facility does not discharge into a local TMDL.

5.4.1.2 Chesapeake Bay TMDL Requirement

The Chesapeake Bay Watershed is a large ecosystem that encompasses approximately 64,000 square miles in Maryland, Delaware, Virginia, West Virginia, Pennsylvania, New York and the District of Columbia. An ecosystem is composed of interrelated parts that interact with each other to form a whole. All of the plants and animals in an ecosystem depend on each other in some way. Every living thing needs a healthy ecosystem to survive. Human activities affect the Chesapeake Bay ecosystem by adding pollution, using resources and changing the character of the land.

Most of the Chesapeake Bay and many of its tidal tributaries have been listed as impaired under Section 303(d) of the federal Water Pollution Control Act ("Clean Water Act"), 33 U.S.C. § 1313(d). While the Chesapeake Bay is outside the boundaries of Pennsylvania, more than half of the State lies within the watershed. Two major rivers in Pennsylvania are part of the Chesapeake Bay Watershed. They are (a) the Susquehanna River and (b) the Potomac River. These two rivers total 40 percent of the entire Chesapeake Bay watershed.

The overall management approach needed for reducing nitrogen, phosphorus and sediment are provided in the Bay TMDL document and the Phase I, II, and III WIPs which is described in the Bay TMDL document and Executive Order 13508.

The Bay TMDL is a comprehensive pollution reduction effort in the Chesapeake Bay watershed identifying the necessary pollution reductions of nitrogen, phosphorus and sediment across the seven Bay watershed jurisdictions of Delaware, Maryland, New York, Pennsylvania, Virginia, West Virginia and the District of Columbia to meet applicable water quality standards in the Bay and its tidal waters.

The Watershed Implementation Plans (WIPs) provides objectives for how the jurisdictions in partnership with federal and local governments will achieve the Bay TMDL's nutrient and sediment allocations.

Phase 3 WIP provides an update on Chesapeake Bay TMDL implementation activities for point sources and DEP's current implementation strategy for wastewater. The latest revision of the supplement was December 17, 2019.

The Chesapeake Bay TMDL (Appendix Q) categorizes point sources into four sectors:

- Sector A- significant sewage dischargers;
- Sector B- significant industrial waste (IW) dischargers;
- Sector C- non-significant dischargers (both sewage and IW facilities); and
- Sector D- combined sewer overflows (CSOs).

All sectors contain a listing of individual facilities with NPDES permits that were believed to be discharging at the time the TMDL was published (2010). All sectors with the exception of the non-significant dischargers have individual wasteload allocations (WLAs) for TN and TP assigned to specific facilities. Non-significant dischargers have a bulk or aggregate allocation for TN and TP based on the facilities in that sector that were believed to be discharging at that time and their estimated nutrient loads.

Based upon the supplement the subject facility has been categorized as a Sector C discharger. The supplement defines Sector C as a non-significant discharger that includes sewage facilities (Phase 4 facilities: ≥ 0.2 MGD and < 0.4 MGD and Phase 5 facilities: > 0.002 MGD and < 0.2 MGD), small flow/single residence sewage treatment facilities (≤ 0.002 MGD), and non-significant IW facilities, all of which may be covered by statewide General Permits or may have individual NPDES permits.

At this time, there are approximately 850 Phase 4 and 5 sewage facilities, approximately 715 small flow sewage treatment facilities covered by a statewide General Permit, and approximately 300 non-significant IW facilities.

Due to the low flow rate generated by this facility, this facility is not subject to Sector C monitoring requirements.

5.5 Anti-Degradation Requirement

Chapter 93.4a of the PA regulations requires that surface water of the Commonwealth of Pennsylvania may not be degraded below levels that protect the existing uses. The regulations specifically state that *Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.* Antidegradation requirements are implemented through DEP's guidance manual entitled Water Quality Antidegradation Implementation Guidance (Document #391-0300-02).

The policy requires DEP to protect the existing uses of all surface waters and the existing quality of High Quality (HQ) and Exceptional Value (EV) Waters. Existing uses are protected when DEP makes a final decision on any permit or approval for an activity that may affect a protected use. Existing uses are protected based upon DEP's evaluation of the best available information (which satisfies DEP protocols and Quality Assurance/Quality Control (QA/QC) procedures) that indicates the protected use of the waterbody.

For a new, additional, or increased point source discharge to an HQ or EV water, the person proposing the discharge is required to utilize a nondischarge alternative that is cost-effective and environmentally sound when compared with the cost of the proposed discharge. If a nondischarge alternative is not cost-effective and environmentally sound, the person must use the best available combination of treatment, pollution prevention, and wastewater reuse technologies and assure that any discharge is nondegrading. In the case of HQ waters, DEP may find that after satisfaction of intergovernmental coordination and public participation requirements lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In addition, DEP will assure that cost-effective and reasonable best management practices for nonpoint source control in HQ and EV waters are achieved.

The subject facility's discharge will be to a non-special protection waters and the permit conditions are imposed to protect existing instream water quality and uses. Neither HQ waters or EV waters is impacted by this discharge.

5.6 Anti-Backsliding

Anti-backsliding is a federal regulation which prohibits a permit from being renewed, reissued, or modified containing effluent limitations which are less stringent than the comparable effluent limitations in the previous permit (40 CFR 122.I.1 and 40 CFR 122.I.2).

This application is for a new NPDES permit. Thus, anti-backsliding is not applicable. However, future permit renewals may be subject to antibacksliding.

6.0 NPDES Parameter Details

The basis for the proposed sampling and their monitoring frequency that will appear in the permit for each individual parameter are itemized in this Section. The final limits are the more stringent of technology based effluent treatment (TBEL) requirements, water quality based (WQBEL) limits, TMDL, antidegradation, anti-degradation, or WET.

The reader will find in this section:

- a) a justification of recommended permit monitoring requirements and limitations for each parameter in the proposed NPDES permit; and
- b) a summary of the proposed NPDES effluent limits.

6.1 Recommended Monitoring Requirements and Effluent Limitations

A summary of the recommended monitoring requirements and effluent limitations are itemized in the table. The table is categorized by Conventional Pollutants and Disinfection.

Summary of Proposed NPDES Parameter Details for Conventional Pollutants and Disinfection

6.1.1 Conventional Pollutants and Disinfection

Botteicher Residence, PA0267571					
Parameter	Permit Limitation Required by ¹ :	Recommendation			
BOD	TBEL	Monitoring: The monitoring frequency shall be 1x/yr as a grab sample (SOP) Effluent Limit: Effluent limits shall not exceed 10 mg/l as an average monthly (SOP) Rationale: The monitoring frequency and the effluent limits assigned by the SOP.			
TSS	TBEL	Monitoring: The monitoring frequency shall be 1x/yr as a grab sample (SOP). Effluent Limit: Effluent limits shall not exceed 10 mg/l as an average monthly (SOP) Rationale: The monitoring frequency and the effluent limits assigned by the SOP.			
Fecal Coliform	TBEL	Monitoring: The monitoring frequency shall be 1x/yr as a grab sample (SOP). Effluent Limit: Effluent limits shall not exceed 200 MPN as a geometric mean (SOP). Rationale: The monitoring frequency and the effluent limits assigned by the SOP.			
Notes:					
1 The NPDES	S permit was limited	by (a) anti-Backsliding, (b) Anti-Degradation, (c) SOP, (d) TBEL, (e) TMDL, (f) WQBEL, or (g) WET			
2 Monitoring	frequency based on f	flow rate of 0.0004 MGD.			
3 SOP, New	and Reissuance Sma	all Flow Treatment Facility Individual NPDES Permit Applications, Revised January 13, 2015			
4 Water Qual	ity Antidegradation Ir	mplementaton Guidance (Document # 391-0300-002)			
5 Phase 2 W	atershed Implementa	ation Plan Wastewater Supplement. Revised September 6, 2017			

6.3.1 Summary of Proposed NPDES Effluent Limits

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001), SOPs and/or BPJ.

The proposed NPDES effluent limitations are summarized in the table below.

PART A - EFFLUENT LIMIT	ATIONS, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS
I. A. For Outfall 001	, Latitude40° 22' 39.00", Longitude78° 20' 9.00", River Mile Index4.4, Stream Code16434
Receiving Waters:	Oldtown Run (WWF, MF)
Type of Effluent:	Sewage Effluent

^{1.} The permittee is authorized to discharge during the period from Permit Effective Date through Permit Expiration Date.

Based on the anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply (see also Additional Requirements and Footnotes).

	Effluent Limitations						Monitoring Requirements	
Parameter	Mass Units (Ibs/day) (1)		Concentrations (mg/L)			Minimum (2)	Required	
raiametei	Average Monthly	Average Weekly	Minimum	Annual Average	Maximum	Instant. Maximum	Measurement Frequency	Sample Type
Flow (MGD)	Report Annl Avg	XXX	XXX	XXX	XXX	XXX	1/year	Estimate
BOD5	XXX	XXX	XXX	10.0	XXX	20.0	1/year	Grab
TSS	XXX	XXX	XXX	10.0	XXX	20.0	1/year	Grab
Fecal Coliform (No./100 ml)	XXX	XXX	XXX	200	XXX	XXX	1/vear	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

at Outfall 001

6.3.2 Summary of Proposed Permit Part C Conditions

The subject facility has the following Part C conditions.

- SFTF Maintenance
- Chlorine Minimization

Tools and References Used to Develop Permit
WQM for Windows Model (see Attachment)
Toxics Management Spreadsheet (see Attachment)
TRC Model Spreadsheet (see Attachment)
Temperature Model Spreadsheet (see Attachment)
Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
Technical Guidance for the Development and Specification of Effluent Limitations, 362-0400-001, 10/97.
Policy for Permitting Surface Water Diversions, 362-2000-003, 3/98.
Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 362-2000-008, 11/96.
Technology-Based Control Requirements for Water Treatment Plant Wastes, 362-2183-003, 10/97.
Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 362-2183-004, 12/97.
Pennsylvania CSO Policy, 385-2000-011, 9/08.
Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 391-2000-002, 4/97.
Determining Water Quality-Based Effluent Limits, 391-2000-003, 12/97.
Implementation Guidance Design Conditions, 391-2000-006, 9/97.
Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 391-2000-007, 6/2004.
Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 391-2000-008, 10/1997.
Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 391-2000-010, 3/99.
Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 391-2000-011, 5/2004.
Implementation Guidance for Section 93.7 Ammonia Criteria, 391-2000-013, 11/97.
Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 391-2000-014, 4/2008.
Implementation Guidance Total Residual Chlorine (TRC) Regulation, 391-2000-015, 11/1994.
Implementation Guidance for Temperature Criteria, 391-2000-017, 4/09.
Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 391-2000-018, 10/97.
Implementation Guidance for Application of Section 93.5(e) for Potable Water Supply Protection Total Dissolved Solids, Nitrite-Nitrate, Non-Priority Pollutant Phenolics and Fluorides, 391-2000-019, 10/97.
Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 391-2000-021, 3/99.
Implementation Guidance for the Determination and Use of Background/Ambient Water Quality in the Determination of Wasteload Allocations and NPDES Effluent Limitations for Toxic Substances, 391-2000-022, 3/1999.
Design Stream Flows, 391-2000-023, 9/98.
Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 391-2000-024, 10/98.
Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 391-3200-013, 6/97.
Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
SOP: New and Reissuance Small Flow Treatment Facility Individual NPDES Permit Applications, rev 5/17/19
Other:

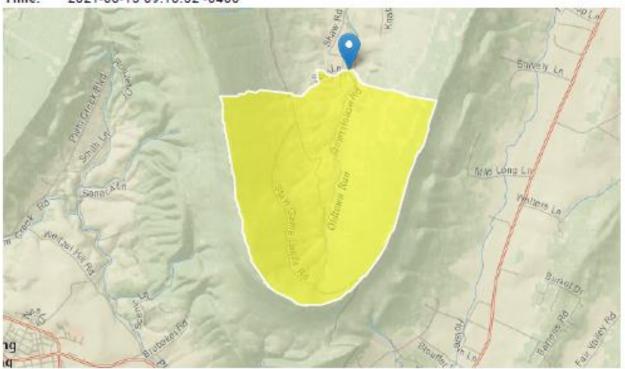
StreamStats Report

Region ID: PA

Workspace ID: PA20210813131832930000

Clicked Point (Latitude, Longitude): 40.37749, -78.33548

Time: 2021-08-13 09:18:52 -0400



Botteicher Residence PA0267571 Modeling Point #1 August 2021

Basin Characte	0.20.00.00		
Parameter			
Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	3.5	square miles
PRECIP	Mean Annual Precipitation	38	inches
STRDEN	Stream Density total length of streams divided by drainage area	1.56	miles per square mile
ROCKDEP	Depth to rock	4.8	feet
CARBON	Percentage of area of carbonate rock	0	percent

Low-Flow Statistics Parameters [Low Flow Region 2]						
Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit	
DRNAREA	Drainage Area	3.5	square miles	4.93	1280	
PRECIP	Mean Annual Precipitation	38	inches	35	50.4	
STRDEN	Stream Density	1.56	miles per square mile	0.51	3.1	
ROCKDEP	Depth to Rock	4.8	feet	3.32	5.65	
CARBON	Percent Carbonate	0	percent	0	99	

Low-Flow Statistics Disclaimers [Low Flow Region 2]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

Low-Flow Statistics Flow Report [Low Flow Region 2]

Statistic	Value	Unit
7 Day 2 Year Low Flow	0.306	ft^3/s
30 Day 2 Year Low Flow	0.419	ft^3/s
7 Day 10 Year Low Flow	0.143	ft^3/s
30 Day 10 Year Low Flow	0.193	ft^3/s
90 Day 10 Year Low Flow	0.318	ft^3/s

Low-Flow Statistics Citations

Stuckey, M.H., 2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p. (http://pubs.usgs.gov/sir/2006/5130/)

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Application Version: 4.6.2

StreamStats Services Version: 1.2.22

NSS Services Version: 2.1.2